

REMARKS

Reconsideration of the present application is respectfully requested. Claim 1 has been amended to clarify the wording regarding a drive connection.

Claims 1-7 are rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 3,993,370 to Woollenweber. This rejection is respectfully traversed. In order to establish a *prima facie* case of anticipation, each and every element and limitation of the subject claim must be disclosed by a single reference. As the Examiner will appreciate the present claims are directed to a power turbine and not a turbocharger. In the power turbine of the present application one end of a drive shaft has a turbine wheel for extracting energy from the exhaust flow from the internal combustion engine and the other end has a drive connection which is coupled to a load demand of the engine. The drive connection allows for the transmission of additional power back to the crankshaft of the engine.

In a general review of turbochargers there are virtually no off axis (referring to the axis of the turbocharger) forces acting on the bearing supporting the turbocharger shaft. In contrast in power turbines the drive connection can exert significant off axis forces on the turbine shaft and therefore fully floating bearings were deemed not suitable. This is because the necessary load carrying oil films of floating bearings require relative motion of both the inner and outer bearing surfaces whereas the significant off axis loading at the drive connection can displace the floating bearing to such an extent that rotation is prevented. Consequently, prior power turbines were provided with a fixed bearing arrangement, such as a rolling element bearing assembly, at the drive connection end of the shaft and a conventional floating bearing at the turbine end of the shaft. The Applicants believe that the cited art does not disclose, teach or suggest utilizing floating bearing for taking the loads associated with the shaft in a power turbine.

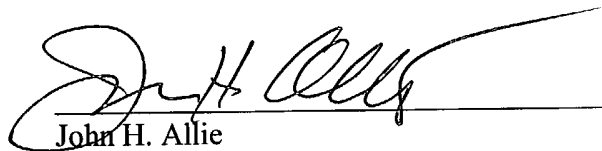
The '370 reference to to Woollenweber discloses a lubricated bearing structure for rotational machinery such as a turbocharger. The '370 reference does not disclose a power turbine. More specifically, the '370 reference does not disclose a drive connection which in use is coupled to a load demand of the internal combustion engine. The '370 reference discloses that the system set forth in Fig. 1 is a conventional bearing construction and the system set forth in Fig. 2 is the inventive aspect of the application. Applicants respectfully disagree that bearings 56 and 58 are mechanically coupled together such that said first and second bearings are constrained to rotate relative to the housing at the same speed. Further, the '370 reference does not consider the utilization of the bearing structure in highly loaded situations such as associated with a power turbine. In summary, the '370 reference fails to disclose, teach or suggest each limitation set forth in claim 1 and therefore cannot be properly utilized to reject the claims. Withdrawal of the §102 rejection of claim 1 is respectfully requested.

Claims 1-10 are rejected under 35 U.S.C. §102(b) as being anticipated by German Patent No. DE3936069 to Stoenner. This rejection is respectfully traversed. The English language abstract and drawings discloses a turbocharger bearing device and not a power turbine. Based upon a review of the limited English abstract and the drawings the '069 reference shows a turbine driving a compressor with the shaft supported by bearings 20 and 22. There appears to be no disclosure of a power turbine and/or a drive connection that in use is coupled to a load demand of an internal combustion engine. Further, the Applicant's respectfully disagree that bearings 20 and 22 are mechanically coupled together such that said first and second bearings are constrained to rotate relative to the housing at the same speed. The Applicants respectfully submit that as in the Woollenweber '370 reference discussed above, the '069 reference fails to disclose the limitations of claim 1. Withdrawal of the §102 rejection is respectfully requested.

Dependent claims 2-10 are at least allowable over the cited art as they depend from independent claims that are believed in condition for allowance.

In view of the foregoing it is submitted that this application which includes claims 1-10 is in condition for allowance. Consideration of an early Notice of Allowability is respectfully requested. The Examiner is encouraged to contact the undersigned by telephone to resolve any outstanding matters concerning this application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John H. Allie", is written over a horizontal line.

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